

IN THE CLAIMS:

Please cancel Claims 1-30 without prejudice or disclaimer.

THE UNIVERSITY OF CHICAGO

✓
Please add the following new claims:

Sub
B-1
31. An optical switch, comprising at least one array of actuated mirrors configured for switching an optical beam from an input port to any output port.

32. An optical switch, comprising at least one array of actuated mirrors configured for switching an optical beam from any input port to an output port.

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33. An optical switch as recited in claim 31 or 32, further comprising means for positioning said optical beam onto at least one array of actuated mirrors.

34. An optical switch as recited in claim 33, wherein said means for positioning comprises at least one lens.

35. An optical switch as recited in claim 31 or 32, further comprising at least one imaging component configured for positioning said optical beam onto at least one array of actuated mirrors.

36. An optical switch as recited in claim 35, wherein said imaging component comprises at least one lens.

37. An optical switch as recited in claim 31 or 32, wherein said optical switch is configured for a specific mirror in at least one array of actuated mirrors to receive an optical beam from a corresponding one specific input port.

38. An optical switch as recited in claim 31 or 32, wherein said optical switch is configured for a specific output port to receive an optical beam from a corresponding one specific mirror in at least one array of actuated mirrors.

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39. An optical switch as recited in claim 31 or 32,
wherein said optical switch is configured for a specific mirror in at least one array of actuated mirrors to receive an optical beam from a corresponding one specific input port; and

wherein said optical switch is further configured for a specific output port to receive an optical beam from a corresponding one specific mirror in said at least one array of actuated mirrors.

40. An optical switch as recited in claim 31 or 32, wherein at least one array of actuated mirrors comprises a two-dimensional array.

Sub B2
41. An optical switch, comprising:
(a) at least one input port;
(b) at least one output port; and
(c) at least one array of actuated mirrors configured for switching an optical beam from an input port to any output port.

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42. An optical switch, comprising:
- (a) at least one input port;
 - (b) at least one output port; and
 - (c) at least one array of actuated mirrors configured for switching an optical beam from any input port to an output port.

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43. An optical switch as recited in claim 41 or 42, further comprising means for positioning said optical beam onto at least one array of actuated mirrors.

44. An optical switch as recited in claim 43, wherein said means for positioning comprises at least one lens.

45. An optical switch as recited in claim 41 or 42, further comprising at least one imaging component configured for positioning said optical beam onto at least one array of actuated mirrors.

46. An optical switch as recited in claim 45, wherein said imaging component comprises at least one lens.

47. An optical switch as recited in claim 41 or 42, wherein said optical switch is configured for a specific mirror in at least one array of actuated mirrors to receive an optical beam from a corresponding one specific input port.

48. An optical switch as recited in claim 41 or 42, wherein said optical switch is configured for a specific output port to receive an optical beam from a corresponding one specific mirror in at least one array of actuated mirrors.

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49. An optical switch as recited in claim 41 or 42,
wherein said optical switch is configured for a specific mirror in at least one array of actuated mirrors to receive an optical beam from a corresponding one specific input port; and

wherein said optical switch is further configured for a specific output port to receive an optical beam from a corresponding one specific mirror in said at least one array of actuated mirrors.

50. An optical switch as recited in claim 41 or 42, wherein at least one array of actuated mirrors comprises a two-dimensional array.

51. An optical switch, comprising:

- (a) at least one input port;
- (b) at least one output port;
- (c) at least one input array of actuated mirrors; and
- (d) at least one output array of actuated mirrors;
- (e) said input and output arrays of actuated mirrors configured for switching an optical beam from an input port to any output port.

A3

52. An optical switch, comprising:

- (a) at least one input port;
- (b) at least one output port;
- (c) at least one input array of actuated mirrors; and
- (d) at least one output array of actuated mirrors;
- (e) said input and output arrays of actuated mirrors configured for switching an optical beam from any input port to an output port.

53. An optical switch as recited in claim 51 or 52, further comprising means for positioning said optical beam onto at least one input array of actuated mirrors.

54. An optical switch as recited in claim 53, wherein said means for positioning comprises at least one lens.

55. An optical switch as recited in claim 51 or 52, further comprising at least one imaging component configured for positioning said optical beam onto at least one input array of actuated mirrors.

56. An optical switch as recited in claim 55, wherein ^{said} at least one imaging component comprises at least one lens. ✓

57. An optical switch as recited in claim 51 or 52, wherein said optical switch is configured for a specific mirror in at least one input array of actuated mirrors to receive an optical beam from a corresponding one specific input port.

58. An optical switch as recited in claim 51 or 52, wherein said optical switch is configured for a specific output port to receive an optical beam from a corresponding one specific mirror in at least one output array of actuated mirrors.

59. An optical switch as recited in claim 51 or 52, wherein said optical switch is configured for a specific mirror in at least one input array of actuated mirrors to receive an optical beam from a corresponding one specific input port; and

wherein said optical switch is further configured for a specific output port to receive an optical beam from a corresponding one specific mirror in at least one output array of actuated mirrors.

60. An optical switch as recited in claim 51 or 52, wherein each mirror in at least one input array of actuated mirrors is configured to steer an incident optical beam to any, but not more than one for a given setting, mirror in at least one output array of actuated mirrors.

61. An optical switch as recited in claim 51 or 52, wherein each output mirror in at least one output array of actuated mirrors can be set to receive an optical beam

from any, but not more than one for a given setting, mirror in at least one input array of actuated mirrors.

62. An optical switch as recited in claim 51 or 52,

wherein each mirror in at least one input array of actuated mirrors is configured to steer an incident optical beam to any, but not more than one for a given setting, mirror in at least one output array of actuated mirrors; and

wherein each output mirror in at least one output array of actuated mirrors can be set to receive an optical beam from any, but not more than one for a given setting, mirror in at least one input array of actuated mirrors.

63. An optical switch as recited in claim 51 or 52, wherein at least one array of actuated mirrors comprises a two-dimensional array.

64. An optical switch as recited in claim 51 or 52, wherein at least one output array of actuated mirrors is spatially separated from at least one input array of actuated mirrors.